

# Work Order ID 71854

Wednesday, July 13, 2011 11:00:09 AM



Page 1

Item ID: D3183-5

Accept



Setup Start



Revision ID:

Stop



Item Name: Bearing

Start Date: 7/14/2011

Start Qty: 20.00



Cust Item ID:

Required Date: 7/28/2011

Req'd Qty: 20.00

Customer:

Reference:

Approvals:

Process Plan: MF

Date: 11-07-03

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr	Revision Nbr
D3183	Rev C1

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 14481 ☐ Bearing as per Dwg D3183 ☐ Single row, deep groove, Conrad type, shielded ☐ Possible Supplier: NSK P/N 6800ZZ ☐ Certificate of conformity note is required

CZ 11/07/14 (50)

110

0.00



Receive & Inspect for Damage & Mat'l Certs

Packaging

Memo

0.00

Packaging

Ensure certificate of conformity is attached

P 4/12/15 (50)

120

0.00



QC6- Inspect dimensions to drawing

QC

Memo

0.00

Quality Control

Sulas 15

county (50)

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 71854**

Wednesday, July 13, 2011 11:00:09 AM

Page 2

Item ID: D3183-5

Accept

Revision ID:

Item Name: Bearing

Start Date: 7/14/2011 Start Qty: 20.00

Required Date: 7/28/2011 Req'd Qty: 20.00

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130



Packaging

Packaging

Identify as per dwg & Stock Location: 220B

0.00

Memo

0.00

140



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

4/17/18 (50)

11/7/18 (50)

11-07-18 (50)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, July 13, 2011 11:00:05 AM

Page 1

Work Order ID: 71854



Parent Item: D3183-5



Parent Item Name: Bearing


Start Date: 7/14/2011

Required Date: 7/28/2011

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP: A 03.03.27 New issue KJ/RF

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
6800ZZ  Bearing		Purchased	No			100	Each	0.0000	1	20		7/14/11	(30)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

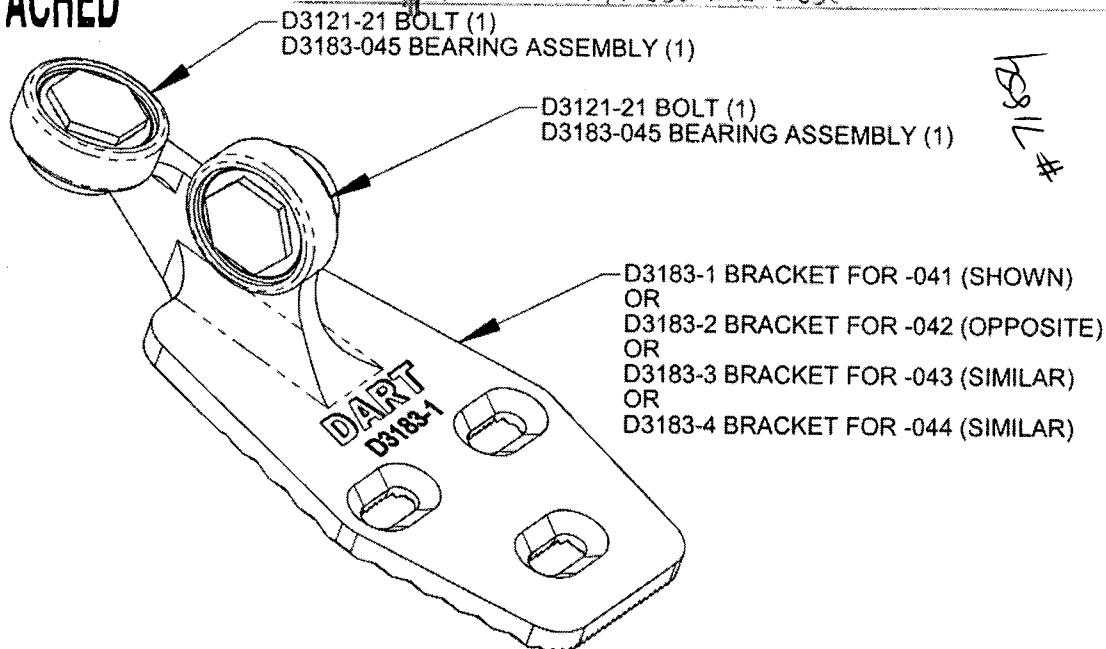
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

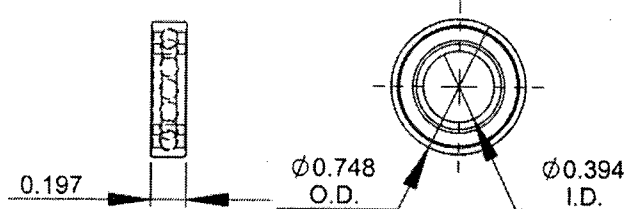


DESIGN #	DRAWN BY CP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. <b>D3183</b>	REV. C SHEET 1 OF 4
DATE <b>04.02.17</b>		TITLE <b>BRACKET ASSEMBLY</b>	SCALE 1:1
A	03.01.24	NEW ISSUE	
B	03.06.17	REMOVE BEARING; 1.012 WS 0.882	
C	04.02.17	ADD -045/-9; 0.182 WAS 0.431	
CI	<del>#</del> 04.11.09	0.830 WAS 0.850	

RELEASED  
04.03.01  
DEO ATTACHED

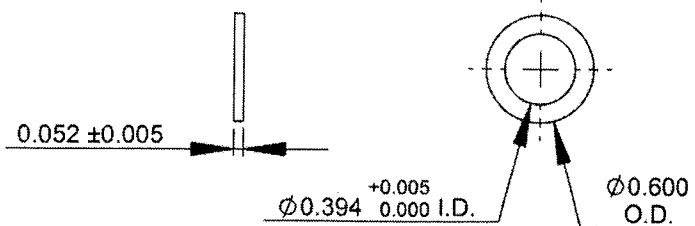


**D3183-041 BRACKET ASSEMBLY (SHOWN)**  
**D3183-042 BRACKET ASSEMBLY (OPPOSITE)**  
**D3183-043 BRACKET ASSEMBLY (SIMILAR)**  
**D3183-044 BRACKET ASSEMBLY (SIMILAR)**



**D3183-5 BEARING:**  
**SPECIFICATION CONTROL DRAWING**

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



**D3183-7 WASHER**

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

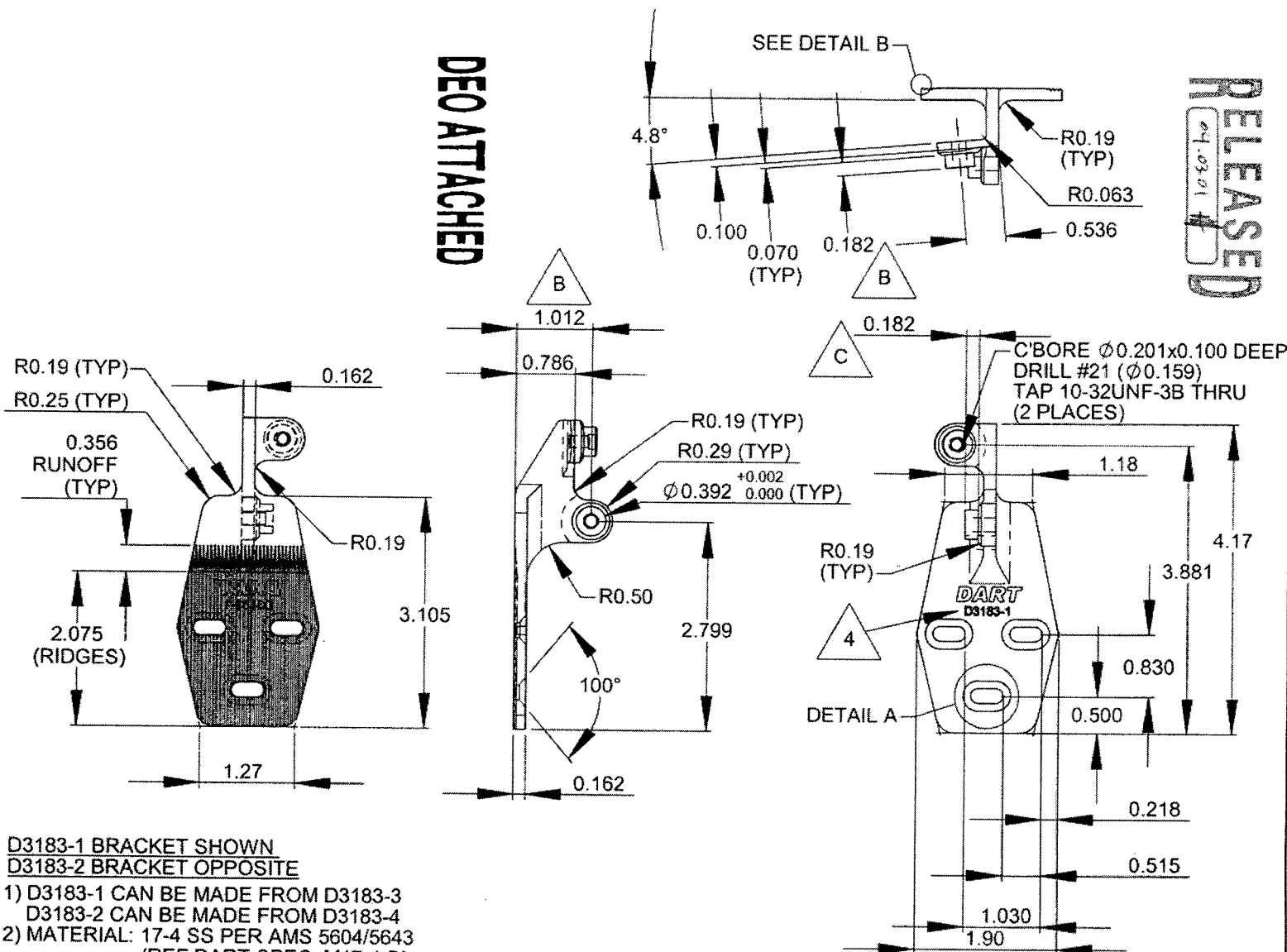




DESIGN	DRAWN BY	DART AEROSPACE LTD	
		HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. C
		D3183	SHEET 2 OF 4
DATE	TITLE	SCALE	
04.02.17	BRACKET ASSEMBLY	1:2	

RELEASED  
04.03.01

DEO ATTACHED



**D3183-1 BRACKET SHOWN  
D3183-2 BRACKET OPPOSITE**

- 1) D3183-1 CAN BE MADE FROM D3183-3  
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

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#71854

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

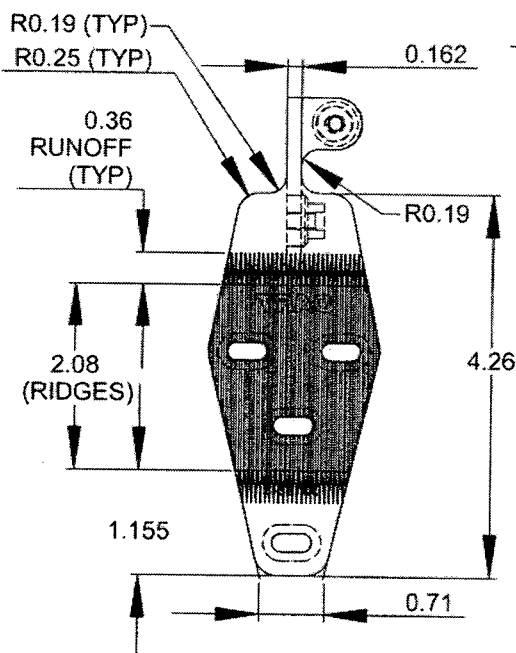
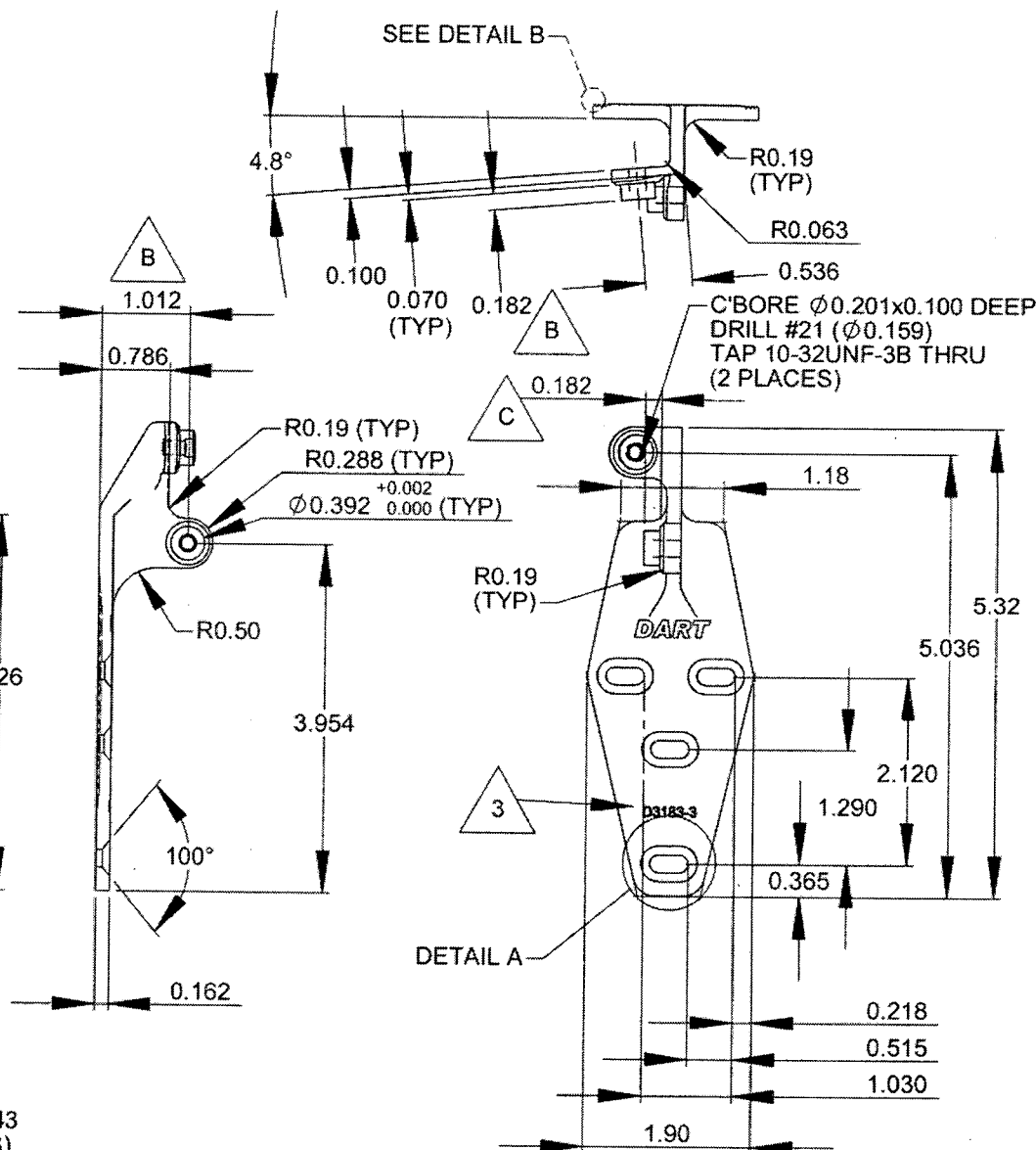
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE 04.02.17	DRAWING NO. D3183	REV. C
	TITLE BRACKET ASSEMBLY	SHEET 3 OF 4
		SCALE 1:2



D3183-3 BRACKET SHOWN  
(REPLACES BELL P/N 412-030-304-105)  
D3183-4 BRACKET OPPOSITE  
(REPLACES BELL P/N 412-030-304-106)

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

#71854

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DEO ATTACHED  
RELEASED  
04.02.01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

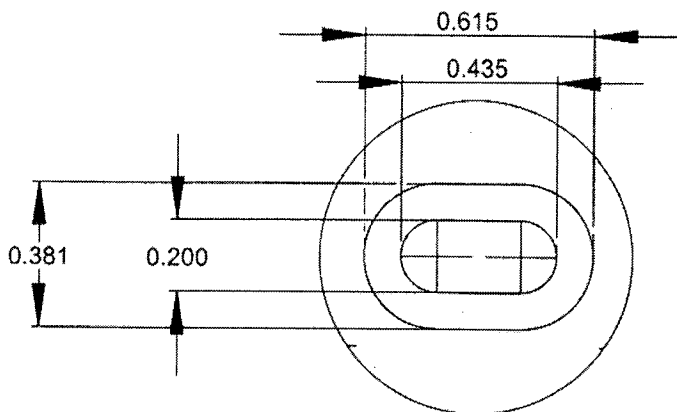
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DESIGN #	DRAWN BY #	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. <b>D3183</b>	REV. C SHEET 4 OF 4
DATE <b>04.02.17</b>	TITLE <b>BRACKET ASSEMBLY</b>		SCALE 1:1

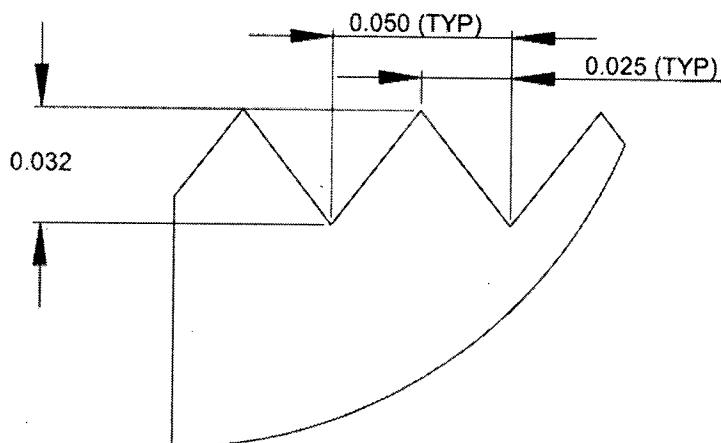


DETAIL A (2 : 1)

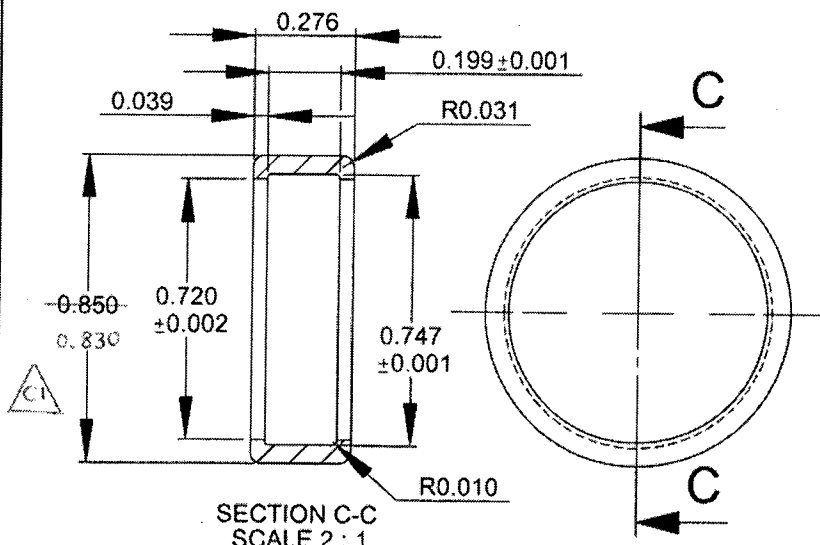
15811 #

RELEASED  
04.03.01

DEO ATTACHED



DETAIL B (20 : 1)



**D3183-9 CAP**

- 1) MATERIAL: DELRIN ROD, Ø1.00  
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018  
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

**D3183-045 BEARING ASSEMBLY**

- 1) ASSEMBLE D3183-5 BEARING AND  
D3183-9 CAP

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO14481**

Purchase Order Date 7/14/2011

PO Print Date 7/14/2011

Page Number 1 of 1

Order From :

VC-MAI001

MAIN INDUSTRIAL SALES LTD.  
1475, TESSIER  
HAWKESBURY, ON K6A 3S6  
CA

Contact Name

Vendor Phone

613 632 3595

Vendor Fax

613 632 0262

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

PAID  
7/14/2011

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	6800ZZ	Bearing	7/18/2011 Yes	50.00 Each	Yours ppd	\$1.4800	\$74.00

Special Inst:

AS PER DWG D3183 REV. C  
B71854  
SINGLE ROW, DEEP GROOVE, CONRAD  
TYPE  
SHIELDED P/N: NSK 6800 ZZ

PO Total:

\$74.00

CERTIFICATE OF CONFORMITY  
REQD UPON DELIVERY

Change Nbr: 1

Change Date: 7/14/2011

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

MAIN INDUSTRIAL SALES LTD.

1475 TESSIER ST.  
HAWKESBURY ON K6A 3S6  
Phone: (613) 632-3595 Ext. Fax: (613) 632-0262  
sales@mainindustrialsales.com

Packing Slip

DATE July 14, 2011  
NUMBER 0000146311  
CUSTOMER NO. DART

BILL TO:  
DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY ON K6A 1K7

SHIP TO:  
DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY ON K6A 1K7

(613) 632-5200 Ext.

(613) 632-5200 Ext.

P.O. NUMBER	SALESPERSON	ORDER DATE	REQ. DATE	ORDER NUMBER
14481	EB	14-Jul-11		0000146311
F.O.B.	SHIP VIA	TERMS		
F.O.B. value	PICK UP	NET 30 DAYS		
PART NUMBER	UOM	QUANTITY		
DESCRIPTION		REQ.	SHIPPED	B.O.
0-68002ZKML BALL BEARING YOUR PART #: 6800ZZ <i>Sulzer</i>	EA	50	50	